**S1 Figure.** Overview on the overall hydromorphological status of the modelled River Treene (catchment: 760 km<sup>2</sup>) and existing migration barriers. Large parts of the river have been straightened; 66% of its length is in a poor (orange) or bad (red) hydromorphological state, only some few short near-natural meandering reaches are still present (1.5% of the river length, green). The river network is fragmented by a total of 52 barriers (0.16/km, black triangles). Hydromorphological data were kindly provided by the State Agency for Agriculture, Environment and Rural Areas (LLUR) of the federal state of Schleswig Holstein (status May 2011).

